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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Application Number 10/031,181

Filing Date January 16, 2002

First Named Inventor Stallings, et al.

Group Art Unit Unknown

Examiner Name Unknown

Total Number of Pages in This Submission 13

Attorney Docket Number 3333/1/US

## ENCLOSURES (check all that apply)

☐ Fee Transmittal Form☐ Fee Attached☐ Amendment / Response☐ After Final☐ Affidavits/declaration(s)☐ Extension of Time Request☐ Express Abandonment Request☒ Information Disclosure Statement☐ Certified Copy of Priority Document(s)☐ Response to Missing Parts/ Incomplete Application☐ Response to Missing Parts under 37 CFR 1.52 or 1.53☐ Assignment Papers (for an Application)☐ Drawing(s)☐ Licensing-related Papers☐ Petition☐ Petition to Convert to a Provisional Application☐ Power of Attorney, Revocation Change of Correspondence Address☐ Terminal Disclaimer☐ Request for Refund☐ CD, Number of CD(s) \_\_\_\_\_☐ After Allowance Communication to Group☐ Appeal Communication to Board of Appeals and Interferences☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)☐ Proprietary Information☐ Status Letter☒ Other Enclosure(s) (please identify below):

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Form 1449

41 References

Sequence Listing Statement

Sequence Listing

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Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

David M. Gryte, Reg. No. 41,809

Signature

Date

June 6, 2002

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Stallings, et al.  
Serial No.: 10/031,181  
Filed: January 16, 2002  
For: Method of Changing Conformation of a Matrix Metalloproteinase  
Group Art Unit: Unknown  
Examiner: Unknown  
Attorney Ref.: 3333/1/US

**INFORMATION DISCLOSURE STATEMENT**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir/Madam:

To comply with 37 CFR 1.97 and 1.98, a copy of Form PTO-1449 and copies of the documents listed on it are enclosed.

In accordance with MPEP 609 and 707.05(b), Applicant respectfully requests that each document listed be given thorough consideration and that the Examiner cite each document of record in the prosecution history of the present application by initialing Form PTO-1449 next to each document. Applicant requests such initialing even if the Examiner does not consider: (1) a listed document to be sufficiently pertinent to use in a rejection; (2) a document to be prior art for any reason; or (3) that the guidelines for citation have been fully complied with respecting a particular document. Applicant makes this request so that each document becomes cited on the face of a patent issuing on the present application.

Applicant submits the present Information Disclosure Statement in compliance with the duty to disclose information material to patentability under 37 CFR 1.56, but by listing such documents Applicant is not admitting that such documents are necessarily relevant or prior art. Applicant intends no representation that the listed documents represent the results of a complete search. Applicant anticipates that the Examiner, in the normal course of examination, will make an independent search consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of such

search, will review for relevance every document listed on the attached Form even if not initialed.

Applicant makes no representation as to the accuracy of any translation provided with this Information Disclosure Statement.

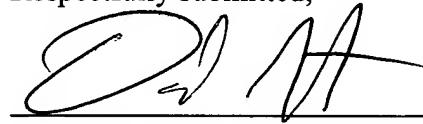
Applicant believes there are no fees due in connection with the filing of this Information Disclosure Statement. If, however, there is ever a deficiency, please charge any fees to our Deposit Account No. 08-0750.

Applicant solicits early and favorable consideration.

Date:

6/6/02

Respectfully submitted,

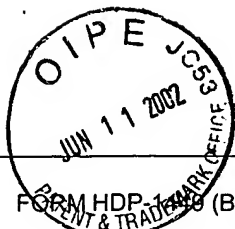


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**CERTIFICATE OF MAILING**

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Sheet 1 of 3

ATTORNEY DOCKET No.

SERIAL No.

3333/1/US

10/031,181

APPLICANT

Stallings et al.

FILING DATE

GROUP

January 16, 2002

Not known

**U.S. PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Purported Publication Date	Name	Class/ Subclass	Purported Filing Date
1		4,595,700	06/17/1986	Donald et al.	514/616	02/21/1985
2		6,362,183	03/26/2002	Freskos et al.	514/238.2	03/04/1997

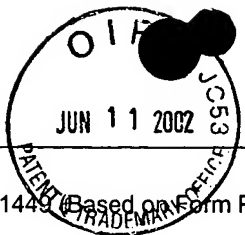
**FOREIGN PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Purported Publication Date	Country	Class/ Subclass	Translation Yes	No
3		WO 90/05719	05/31/1990	PCT	C07C 323/62		
4		WO 93/20047	10/14/1993	PCT	C07C 317/44		
5		WO 94/02466	02/03/1994	PCT	C07D 221/14		
6		WO 95/09841	04/13/1995	PCT	C07C 323/60		
7		WO 95/13289	05/11/1995	PCT	A61K 9/127		
8		WO 95/29892	11/09/1995	PCT	C07D 207/327		
9		WO 96/06074	02/29/1996	PCT	C07C 259/06		
10		WO 97/20824	06/12/1997	PCT	C07D 241/04		
11		WO 97/24117	07/10/1997	PCT	A61K 31/19		
12		WO 98/03166	01/29/1998	PCT	A61K 31/18		
13		WO 98/39329	09/11/1998	PCT	C07D 413/12		
14		WO 98/39315	09/11/1998	PCT	C07D 309/08		
15		WO 99/42433	08/26/1999	PCT	C07C 201/08		
16		WO 94/24140	10/27/1994	PCT	C07H 13/04		
17		EP 0 757 037 A2	02/05/1997	Europe	C07C 311/42		
18		EP 0 757 984 A1	02/12/1997	Europe	C07C 311/46		

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						Yes	No
19		EP 0 780 386 A1	06/25/1997	Europe	C07D 309/08		
20		EP 0 950 656 A1	10/20/1999	Europe	C07C 311/00		
21		JP 11-236369	08/31/1999	Japan	C07C 311/45		x
22		JP 11-246527	09/14/1999	Japan	C07D 213/55		x

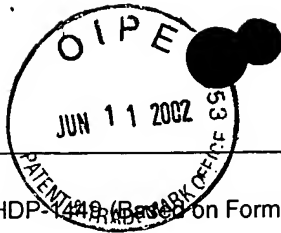
**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

Ref. Desig.	Examiner's Initials	
23		Reinemer et al., <i>Structural implications for the role of the N terminus in the 'superactivation' of collagenases</i> , FEBS LETTERS, 338:227-233 (1994).
24		Brünger, <i>Free R value: a novel statistical quantity for assessing the accuracy of crystal structures</i> , NATURE, 355:472-475 (1992).
25		Denis et al., <i>Matrix metalloproteinase inhibitors: Present achievements and future prospects</i> , INVESTIG. NEW DRUGS, 15:175-185 (1997).
26		Gearing et al., <i>Processing of tumour necrosis factor-<math>\alpha</math> precursor by metalloproteinases</i> , NATURE, 370:555-557 (1994).
27		Grams et al., <i>X-ray structures of human neutrophil collagenase complexed with peptide hydroxamate and peptide thiol inhibitors - Implications for substrate binding and rational drug design</i> , EUR. J. BIOCHEM., 228:830-841 (1995).
28		Jones et al., <i>Improved methods for building protein models in electron density maps and the location of errors in these models</i> , ACTA. CRYST., A47:110-119 (1991).
29		Kiyama et al., <i>Homology modeling of gelatinase catalytic domains and docking simulations of novel sulfonamide inhibitors</i> , J. MED. CHEM., 42:1723-1738 (1999).
30		Lovejoy et al., <i>Crystal structures of MMP-1 and -13 reveal the structural basis for selectivity of collagenase inhibitors</i> , NAT. STRUC. BIOL., 6(3):217-221 (1999).
31		McGehean et al., <i>Regulation of tumour necrosis factor-<math>\alpha</math> processing by a metalloproteinase inhibitor</i> , NATURE, 370:558-561 (1994).
32		Mitchell et al., <i>Cloning, expression, and type II collagenolytic activity of matrix metalloproteinase-13 from human osteoarthritic cartilage</i> , J. CLIN. INVEST., 97(3):761-768 (1996).
33		Morgunova et al., <i>Structure of human pro-matrix metalloproteinase-2: Activation mechanism revealed</i> , SCIENCE, 284:1667-1670 (1999).

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10/031,181

APPLICANT

Stallings, et al.

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January 16, 2002

Not known

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

Ref. Desig.	Examiner's Initials	
34		Nicholls et al.; <i>Protein folding and association: Insights from the interfacial and thermodynamic properties of hydrocarbons</i> , PROTEINS, 11(4) 281-296 (1991).
35		Otwinowski, <i>Oscillation data reduction program</i> , in PROCEEDINGS OF CCP-4 STUDY WEEKEND: DATA COLLECTION AND PROCESSING, 56-62 (1993).
36		Parks et al., <i>MATRIX METALLOPROTEINASES</i> , 32-33 (1998).
37		Rasmussen et al., <i>Matrix metalloproteinase inhibition as a novel anticancer strategy: A review with special focus on batimastat and marimastat</i> , PHARMACOL. THER., 75(1):69-75 (1997).
38		Reboul et al., <i>The new collagenase, collagenase-3, is expressed and synthesized by human chondrocytes but not by synoviocytes</i> , J. CLIN. INVEST., 97(9):2011-2019 (1996).
39		Schwartz et al., <i>Synthetic inhibitors of bacterial and mammalian interstitial collagenases</i> , PROG. IN MED. CHEM., 29:271-334 (1992).
40		Tamura et al., <i>Highly selective and orally active inhibitors of type IV collagenase (MMP-9 and MMP-2): N-sulfonylamino acid derivatives</i> , J. MED. CHEM., 41:640-649 (1998).
41		PCT/US00/16323 (WO 01/05389) International Search Report and Transmittal, 9 pgs.

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